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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,022	11/20/2000	Paul W. Dent	8194-434	9645
20792	7590	09/29/2004	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC PO BOX 37428 RALEIGH, NC 27627			VO, DON NGUYEN	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/718,022

Applicant(s)

DENT, PAUL W.

Examiner

DON N VO

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-78 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/5/01 ; 7/26/02 & 11/13/02</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 30-40, 47-49, 70-72, and 76-78 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaiser et al (6,188,717).

Regarding claims 30-32, 39, 40, 47, 48, 70, 71, and 76-78, Kaiser, as shown in figures 1a-5 and 7-9b, teaches a method and apparatus for communicating data comprising a transmitter having means for convolutional encoding (34) and means for transforming (35-38 and 40) and a receiver having means for reverse transforming (43-48) and a decoder using Viterbi algorithm (49). See also column 5, line 22 to column 9, line 11.

Regarding claims 33-38, 49, and 72, Kaiser further teaches performing scrambling, descrambling, and orthogonal Walsh transforming. See column 5, lines 22-65 and column 7, lines 28-64.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-29, 41-46, 50-69, and 73-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiser et al (6,188,717) in view of Blaker et al (5,747,650) or Bright et al (5,729,559).

Regarding claims 1-3, 19-22, 26-29, 41-45, 50-60, 73, and 75, Kaiser teaches all subject matter claimed except for explicitly teaching use of a rate one convolutional encoder/decoder. See citation as in paragraph 2 above. Kaiser emphasizes mostly on rate $\frac{1}{2}$ convolutional encoding/decoding. However, Kaiser also suggests that other parameters of the modulation, channel coding, etc. can be selected based on the data. See column 3, lines 53-63. Moreover, encoding/decoding signal using rate one convolutional code is well known in the art of error correction encoding/decoding. For examples, Blaker teaches a processor for performing convolutional coding/decoding for rates $\frac{1}{1}$ through $\frac{1}{6}$ (see column 1, line 56 to column 2, line 12, column 2, lines 60-65 and column 3, lines 7-13) or Bright teaches processing a rate one convolutional code (see column 2, lines 55-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Kaiser by employing the teaching of Blaker et al or Bright et al into the encoder/decoder

so that a rate one encoding/decoding can be achieved since such modification is just an alternative way of encoding/decoding the signal.

Regarding claims 4-18, 23, 24, 46, 61-69, and 74, Kaiser further teaches interleaving/deinterleaving, scrambling/descrambling and orthogonal Walsh transformation. See column 5, lines 22-65; column 6, lines 29-53; and column 7, line 28 to column 8, line 25.

Regarding claims 25, Kaiser further teaches block coding using cyclic redundancy check. See column 6, lines 39-53.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference Love et al (5,862,453) is cited because it is pertinent to the system for communicating data having encoder/decoder, interleaver/deinterleaver, and orthogonal encoder.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DON N VO whose telephone number is (571) 272-3018. The examiner can normally be reached on TUE - FRI (9:00-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MOHAMMAD GHAYOUR can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DON N VO
Primary Examiner
Art Unit 2631